APPENDIX XXX – SELF-SERVICE INTERFACE DESIGN SPECIFICATION SEC SUBSIDIARY DRAFT

Defined Terms

Term	Expansion (with Explanation)
DNS	Domain Name System (a distributed naming system for computers, services, or any resource connected to the Internet or a private network)
Interface Transaction	means one of the defined interactions with the Self Service Interface as detailed within this document
MPLS	Multi-Protocol Label Switching (a wide-area data network providing robust connectivity independent of the network transport protocol used)
PEP	Policy Enforcement Point, a logical entity that enforces policies for admission control and policy decisions in response to a request for access. It is the logical boundary between the DCC Systems and connecting systems, namely User Systems and RDP Systems. The PEP ensures that: (a) the policies in the applicable Code of Connection relevant to the applicable Party are being enforced; (b) there is appropriate separation of the DCC Systems from the connecting systems of the applicable Party; and (c) all the connections to the User Systems, RDP Systems, or DCC Systems are compliant with the same applicable Code of Connection.
SAML	Security Assertion Markup Language (an open, published framework for exchanging security information between online business partners)
Smart Card Token	a physical security device used to assist authentication of User Personnel
Supported Web Browser	Internet Explorer versions 9, 10 and 11, and a minimum of 2 other browsers as listed, and as updated from time to time, on the DCC Website."

1 SELF-SERVICE INTERFACE DEFINITION

1.1 Connection Mechanism

A User shall secure the connection between a Supported Web Browser used to interact with the Self Service Interface and that User's PEP. The DCC shall ensure that unencrypted browser requests are redirected to the equivalent secure URL.

Where a User uses the same DCC Gateway Connection for accessing the Self-Service Interface and for User Gateway interactions, that User shall ensure the performance of that DCC Gateway Connection in relation to the processing of interactions over the DCC User Gateway Interface is not materially affected by its use for Self-Service Interface interactions.

The DCC shall make the Self-Service Interface available on an Internet Protocol version 4 address range.

The DCC shall provide details of the IP addressing and network configuration to each User as part of the process for obtaining a connection to the Self-Service Interface as described in the Self-Service Interface Code of Connection.

Each User shall use Network Address Translation to remap internal Internet Protocol addresses to the published DCC provided Internet Protocol addresses at the User's firewall prior to accessing the Self-Service Interface

Each User shall use Network Address Translation to remap incoming DCC traffic Internet Protocol addresses from the published Internet Protocol addresses at the User's firewall to the reserved Internet Protocol addresses within their subnet.

1.2 Self-Service Interface address

The DCC shall give reasonable advance notification to Users of the Self-Service Interface of any changes to the Self-Service Interface URL.

1.3 Authorisation

Each user of the Self-Service Interface shall access specific resources based on the User Role and SMKI Organisation ID(s), which are configured as attributes of the Security Assertion Markup Language (SAML) assertion.

1.4 SAML Authentication

The Self-Service Interface shall authenticate each request to access an Interface Transaction by use of a SAML assertion provided either by the DCC Identity Provider Service (see section 1.6) or delegated to a SAML-capable User maintained Identity Provider Service (see section 1.7).

To authenticate each request from a User that seeks to access a Self-Service Interface transaction, the DCC shall use either:

a) A SAML assertion provided by the DCC Identity Provider Service (as defined in section 1.6), or;

b) A SAML assertion provided by a SAML-capable User maintained Identity Provider Service (as defined in section 1.7)

Where a member of a User's User Personnel makes a request to access a resource provided via the Self-Service Interface without presenting a SAML assertion, the following authentication process occurs:

1. The Self-Service Interface shall send a SAML assertion request to the Identity Provider Service via the User Personnel's browser;
2. The Identity Provider Service shall prompt that person to provide credentials (username, password, and certificate);
3. That person shall provide the requested credentials to the Identity Provider Service;
4. The Identity Provider Service shall validate the person's credentials and send a SAML response including a SAML assertion to the Self-Service Interface; and
5. The Self-Service Interface shall grant or deny that person's access to the resource based on the SAML assertion in the response message.

If the User Personnel makes a request to access a resource whilst presenting a SAML assertion, only step 5 of the above process is executed.

After initial authentication of the person's SAML assertion, the DCC shall store a secure cookie on the member of User Personnel's browser. If this cookie exists during subsequent authentication, the DCC shall bypass SAML authentication.

Each User shall ensure SAML assertions are transmitted in accordance with the Self-Service Interface Code of Connection.

The DCC shall timeout sessions after a period of inactivity of 15 minutes or as otherwise suggested by the DCC and agreed by the SEC Panel.

1.5 Communications Authentication

To authenticate the session, both the DCC and the User will require a DCCKI Infrastructure Certificate obtained and implemented as described in the DCCKI RAPP and DCCKI Interface Design Specification.

The User shall secure the connection between User Personnel browsers and the User's Policy Enforcement Point, to protect security token contents and to enable the browser to return the secure cookies set by the Self-Service Interface.

1.6 SAML Authentication via the DCC Identity Provider Service

The Self-Service Interface shall direct unauthenticated User Personnel who do not use their own approved SAML-based Identity Provider Service to the DCC Identity Provider Service.

The User shall:

a) appoint and notify the DCC of at least one Administration User, who shall be responsible for creating and managing User Personnel accounts on behalf of the User; and
b) be responsible for the verification of each individual Administration User's identity and the secure issuance of credentials to those individuals

In accordance with the procedures set out in the DCCKI RAPP, the DCC shall

a) issue each Administration User with a username, a one-time password, and a Smart Card Token ; and
b) configure the DCC identity management systems and set up an account for each Administration User.

The User shall appoint at least one individual to manage User Personnel in the DCC Identity Provider Service, who will appoint User Personnel to roles described in section 1.12.

The Administration User shall issue User Personnel with a username and one-time password, and create a certificate to be stored in their browser's key store for use in future sessions using the procedures set out in the DCCKI RAPP. Administration Users may grant User Personnel different access privileges as required.

The DCC shall ensure that User Personnel who use the DCC Identity Provider Service perform an initial login and generate a new password.

1.7 SAML Authentication via a User Identity Provider Service

1.7.1 Authentication Requirements

The User shall ensure that SAML tokens provided to the DCC comply with the OASIS Standard – Assertions and Protocols for the OASIS Security Assertion Markup Language (SAML) v2.0.

The process for enrolment of a User Identity Provider Service is given in the DCC Self Service Code of Connection.

The User shall ensure that the Identity Provider Service authentication mechanism shall use the appropriate SAML security assertion to demonstrate conformance to UK Government Authentication Framework Level 2.

The User shall be responsible for appointing User Personnel to roles, which are provided in the SAML certificate sent to the DCC. Valid roles that can be specified within the SAML assertions are listed in section 1.12.

The User shall perform verification, validation, role assignment and authentication of its User Personnel pursuant to DCC Gateway connection & Codes of Connection {U4.12}.

1.7.2 User Identity Provider Service Enrolment with DCC

The User shall obtain DCCKI signed certificates in accordance with the DCCKI RAPP,(see [4.6] of DCC Gateway Connection & Codes Of Connection), install the certificates on their Identity Provider Service, configure their Identity Provider Service as defined in this section, and export and securely send a copy of the Identity Provider Service metadata to DCC.

1.7.3 Digital Signatures

The User shall ensure that SAML tokens are signed pursuant to DCC Gateway connection & Codes of Connection.

1.7.4 SAML Profiles, Bindings and Protocols

The User shall ensure that the Identity Provider Service system it uses supports the following SAML profile, binding and protocol:

Profile	Web Browser SSO (single sign-on)
Binding	HTTP POST (HTTP/1.1)
Protocol	Authentication Request Protocol

1.7.5 Identity Provider Service SAML Configuration

The User's browser shall use HTTP POST to exchange SAML between the Identity Provider Service and the Self-Service Interface, as described in section 1.4.

The User shall ensure that their Identity Provider Service:

- shall not sign Authentication Requests (AuthnRequest)
- shall sign SAML Assertions
- shall not sign Authentication responses
- shall not encrypt any part of the SAML assertion
- shall use persistent nameIDs
- shall only include NotBefore, NotOnOrAfter or AudienceRestriction in the SAML Condition elements
- shall set the AudienceRestriction Condition element (if used) to DCC Service Provider ID
- shall set the SAML assertion nameID to be persistent and unique to the user

The Identity Provider Service shall be required to set the following SAML attributes shown in square brackets, making reference to the information shown after each colon:

- [UNIQUE IDENTIFIER IDP]: a unique ID assigned to the SAML response by the Identity Provider Service
- [UNIQUE IDENTIFIER SP]: the Service Provider unique ID from the SAML request
- [TIMESTAMP]: a timestamp in standard SAML format
- [DCC SP URL]: the URL formatted identifier of the Service Provider issuing the Authentication request
- [IDP ISSUER URL]: a URL identifying the Identity Provider Service issuing the SAML assertion
- [SAML ASSERTION UNIQUE IDENTIFIER]: a unique identifier assigned to the SAML assertion by the Identity Provider Service
- [MESSAGE SIGNATURE]: a digital signature generated by the signing of the SAML assertion message using the Identity Provider Service private key
- [USERNAME]: a unique username assigned to the user by the Identity Provider Service

- [DCC SP URL]: the URL formatted identifier of the Service Provider issuing the Authentication request
- [SESSION EXPIRY]: a valid SAML date/time object describing the expiry time of the session associated with the user
- [ASSERTION START]: a valid SAML date/time object describing the start time of the validity of the SAML assertion
- [ASSERTION EXPIRY]: a valid SAML date/time object describing the expiry time of the validity of the SAML assertion
- [SAML AUTHENTICATION CONTEXT]: a valid SAML Authentication Context Class describing the authentication that the user has completed with the Identity Provider Service
- [Role name]: contains valid DCC role name(s) as described in section 1.12. Multiple roles should be specified by separating role names using commas (,).
- [OrgID]: contains valid SMKI organisation ID(s) that the user represents. Multiple organisation IDs should be specified by separating values with commas (,).
- [USER_DISPLAY_NAME]: an optional display name for the user (maximum length 20 characters). It is recommended (but not mandatory) that this is supplied and it is recommended (but not mandatory) that this is unique (within the asserting Identity Provider Service).

1.8 Interactive Web Interface

The User shall configure User Personnel web browsers to support correct operation of the Self-Service Interface in accordance with their rights and obligations as set out in the SEC.

1.9 File Download Interface

The DCC shall ensure that the Self-Service Interface provides User Personnel downloading files with a prompt to save rather than open files.

1.10 Interaction with Order Management Systems (OMS)

The User shall provide public Internet access to services—such as those available via OMS—that are completely external to the Self-Service Interface. The DCC shall ensure that the Self-Service Interface shall display such external links as hyperlinks.

For information, OMS does not share the DCC Self-Service Interface Single Sign On.

Capabilities provided by the CSP OMS are defined in the Communications Hub Handover Support materials (CHHSM) (see section 1.13.9 for additional information).

1.11 Error Handling

The DCC shall present meaningful error codes as per HTTP/1.1 standard and where appropriate links to additional resources.

Where normal web page delivery is not possible, the DCC shall send to the User standard Hypertext Transfer Protocol (HTTP) Response Codes compliant with Hypertext Transfer Protocol - HTTP/1.1 in response to each request that it receives from that User.

1.12 Roles

1.12.1 DCC defined access

For each Interface Transaction, the DCC shall give User Personnel full, conditional (or no) access to that Interface Transaction based on the User Role(s) relating to the User(s) that those User Personnel are associated with .

- 'Full' means that User Personnel can access data and use all functions associated with the specific Interface Transaction
- 'Conditional' means that User Personnel can only access data and functionality based on the User Role(s) and parties relating to the User to which they are associated.

The DCC shall provide full access to the following Interface Transactions for Users with one or more User Roles:

- SM WAN Network Coverage
- DCC Service Alerts
- DCC Service Status
- DCC User Manuals
- FAQs
-
- Knowledge Management
- Raise Service Management Incidents
- Search
- Service Catalogue Publication and Call Off
- Smart Metering Inventory
- Forward Schedule of Change
- User Profile Information

The DCC shall provide conditional access to interested parties in relation to the following Interface Transactions:

- Communications Hub Availability and Diagnostics
- Forecasting and Ordering of Communications Hubs and Auxiliary Equipment
- Problem Management
- Reporting
- Service audit trails
- Update Service Management Incidents
- View Service Management Incidents
- User Account Management

Conditional access controls in relation to interested parties for each Interface Transaction are detailed in section 1.13

Where an individual represents multiple Users, the DCC shall apply permissions cumulatively, with access to Interface Transactions determined by the highest level of access granted by those User’s combined User Roles.

1.12.2 User defined access

Administration Users may assign roles to User Personnel, based on job types, which restricts access to the Interface Transactions allowed by their User Roles (as described in 1.12.1).

Administration Users may grant User Personnel any number of the roles listed below, and DCC shall apply permissions cumulatively, with access to Interface Transactions determined by the highest level of access granted by their combined roles.

The table below shows the mapping of roles to Interface Transactions (User Personnel may only access those Interface Transactions where there is a 'Y' in the corresponding box). Shaded values in the 'roles' columns are recommended by DCC, and may be amended as suggested by DCC and agreed by the SEC Panel.

	User Personnel roles										
Categories of Interface Transaction	**All Access**	**Organisational Administrator**	**Security User**	**Lead Agent**	**Call Centre User**	**MI User**	**Service Management User**	**Smart Meter Operations User**	**Asset Management Ordering**	**SEC Contract Manager**	**Logistics**
Communications Hub availability and diagnostics UC_HubStatus_001 UC_HubStatus_002	Y	Y	N	Y	Y	N	Y	Y	N	N	Y
SM WAN network coverage UC_CSPCoverage_001 UC_CSPCoverage_002	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y
DCC service alerts UC_ServiceAlerts_001, UC_ServiceAlerts_002	Y	Y	N	Y	Y	N	Y	Y	N	N	N
DCC service status UC_ServiceDashboard_001	Y	Y	Y	Y	Y	N	Y	Y	N	N	N
DCC user manuals UC_Manuals_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FAQs UC_FAQ_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Forecasting and ordering of Communications Hubs and auxiliary equipment UC_CSPOMS_001	Y	Y	N	N	N	Y	N	N	Y	N	Y
Forward schedule of change UC_Schedule_001 , UC_Schedule_002 , UC_Schedule_003	Y	Y	N	Y	Y	N	Y	Y	N	N	N
Knowledge management UC_KnowledgeManagement_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Problem management UC_ProblemManagement_001 UC_ProblemManagement_002	Y	Y	Y	Y	N	N	Y	Y	N	Y	Y
Raise service management incidents UC_RaiseSMI_001 UC_RaiseSMI_002 UC_RaiseSMI_003 UC_RaiseSMI_004	Y	Y	Y	N	N	N	Y	N	N	N	Y
Reporting UC_Reports_001	Y	Y	N	Y	N	Y	N	N	N	Y	Y
Search UC_Search_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Service audit trails UC_ServiceAudit_001 , UC_ServiceAudit_002	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Service catalogue publication and call off UC_ServiceCatalogue_001 , UC_ServiceCatalogue_002 , UC_ServiceCatalogue_003	Y	Y	N	Y	N	N	N	N	Y	N	Y
User account management UC_OrgManager_001 , UC_OrgManager_002 , UC_OrgManager_003	N	Y	N	N	N	N	N	N	N	N	N

Categories of Interface Transaction	All Access	Organisational Administrator	Security User	Lead Agent	Call Centre User	MI User	Service Management User	Smart Meter Operations User	Asset Management Ordering	SEC Contract Manager	Logistics
Smart metering inventory UC_Inventory_001 , UC_Inventory_002	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Update service management incidents UC_UpdateSMI_001	Y	Y	Y	N	N	N	Y	N	N	N	Y
User profile information UC_Profile_001	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
View service management incidents UC_ViewSMI_001 UC_ViewSMI_002	Y	Y	Y	Y	N	N	Y	Y	N	Y	Y

1.13 Interface transactions

1.13.1 Freshness of Data Sources

The DCC shall update data in the Self-Service Interface as soon as practicably possible, but in all events within 24 hours of receipt of data.

1.13.2 Common Authentication Preconditions

The following authentication preconditions are common to a number of Interface Transactions:

1. The User has been authenticated by an approved Identity Provider Service (either the DCC Identity Provider Service or a SAML capable User maintained Identity Provider Service enrolled in accordance with the Self-Service Code of Connection).
2. User Personnel must have appropriate permission for the Interface Transaction as defined in section 1.12.

The User shall ensure both preconditions 1 and 2 are met when using the following Interface Transactions:

- UC_CSPCoverage_001 (Main Flow)
- UC_CSPOMS_001 (Main Flow)
- UC_FAQ_001 (Main Flow)
- UC_HubStatus_001 (Main Flow)
- UC_Inventory_001 (Main Flow)
- UC_KnowledgeManagement_001 (Main Flow)
- UC_Manuals_001 (Main Flow)
- UC_ProblemManagement_001 (Main Flow)
- UC_RaiseSMI_001 (Main Flow)
- UC_Reports_001
- UC_Schedule_001 (Main Flow)
- UC_Schedule_002 (Ext. 1 – Calendar View)
- UC_ServiceAlerts_001

- UC_ServiceAudit_001 (Main Flow)
- UC_ServiceCatalogue_001 (Main Flow)
- UC_ServiceDashboard_001 (Main Flow)
- UC_UpdateSMI_001 (Main Flow)
- UC_ViewSMI_001 (Main Flow)

The User shall ensure precondition 1 is met when using the following Interface Transactions:

- UC_OrgManager_001 (Main Flow)
- UC_OrgManager_002 (Ext. 1 – Manage User)
- UC_OrgManager_003 (Ext. 1 – Create User)
- UC_Profile_001
- UC_Search_001

1.13.3 Common Access Control Conditions

The DCC shall grant User Personnel access to appropriate Interface Transactions where those User Personnel are associated with a User that is an interested party in relation to the information provided via that Interface Transaction in accordance with the following access conditions:

1. User Personnel must have appropriate permission for the Interface Transaction as defined in section 1.12.
2. Access to the Interface Transaction is conditional upon the User Roles that the User represents

The User shall ensure condition 1 is met when using the following Interface Transactions:

- UC_HubStatus_001 (Main Flow)
- UC_Reports_001
- UC_UpdateSMI_001 (Main Flow)
- UC_ViewSMI_001 (Main Flow)
- UC_ViewSMI_002 (Ext. 1 – View Specific Incident)
- UC_Schedule_001 (Main Flow)
- UC_Schedule_003 (Ext. 2 – View Specific Event)
- UC_ProblemManagement_001 (Main Flow)

The User shall ensure condition 2 is met when using the following Interface Transactions:

- UC_HubStatus_001 (Main Flow)
- UC_Reports_001
- UC_UpdateSMI_001 (Main Flow)
- UC_ViewSMI_001 (Main Flow)
- UC_ViewSMI_002 (Ext. 1 – View Specific Incident)
- UC_Schedule_001 (Main Flow)
- UC_Schedule_003 (Ext. 2 – View Specific Event)
- UC_ProblemManagement_001 (Main Flow)
- UC_ProblemManagement_002 (Ext. 1 – View Specific Problem)

1.13.4 Log In

Interface transaction name	UC_Login_001
Definition	Enables User Personnel to login and access Self-Service Interface functionality
Preconditions	The User must exist within an approved Identity Management System (the DCC Identity Management System, or a User Identity Management System)
Inputs	Username, password, certificate additionally, upon first login: Memorable word Phrase to be associated with the word
Outputs	Logon confirmation

1.13.5 Smart Metering Inventory

Interface transaction name	UC_Inventory_001 (Main Flow)
Definition	Enables User Personnel to query details of Devices that are or will be enrolled as part of a Smart Metering System
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	One of the following: - MPxN - Device GUID - full postcode - property filter - UPRN
Outputs	If matches are found, a table of results is displayed, showing the following fields for each matching Device: - Device GUID - Device Type - MPxN - Device status - first line of address - UPRN - full postcode

Interface transaction name	UC_Inventory_002 (Ext. 1 – Specific Device Details View)
Definition	Enables User Personnel to query details of Devices that are enrolled, or intended to be enrolled, as part of a Smart Metering System
Preconditions	The User has used the Smart Metering Inventory search to find a specific Device, and followed the Device GUID link, requesting the details view for the selected Device.
Access Control	The button that allows the user to jump across to Service audit trail search for this device is only displayed if the user is responsible for the device
Inputs	One of the following: - MPxN - Device GUID - full postcode - property filter - UPRN - include non-active devices (checkbox)
Outputs	If matches are found, a table of results is displayed, showing the following fields for each matching Device: - Device GUID - Manufacturer - Model Number - Device Type - SME Variant - SMETS Version - WAN Technology TypeFirmware Version - CSP region - MPxN - Device status - first line of address - UPRN - full postcode Related Devices - Device GUID - Device Status - Description of Device

1.13.6 Service audit trails

Interface transaction name	UC_ServiceAudit_001 (Main Flow)
Definition	Enables User Personnel to query the Service audit trail data held within the DCC Data Systems to show a record of all service activity
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	Only User records will be shown in search and individual message view
Inputs	One of the following: - MPxN - Device GUID - UPRN Service reference From date To date
Outputs	If matches are found, a table of results is displayed, showing the following Service audit trail details for each matching Device: **Field Name:** DCC Service User Organisation ID (SMKI Organisation ID) Device ID Sequence Number MPxN Service Request Received Date/Time Service Response Sent Date/Time Service Reference Simplified Transaction Status **Full Details**: Field Name Request ID Response ID DCC Service User Organisation ID (SMKI Organisation ID) Device ID CSP Region Mode of Operation Preceding Request ID (where applicable) MPxN Service Reference Service Reference Variant Command Variant Response Code Current Status Anomaly Detection Flag Status Change History

Interface transaction name	UC_ServiceAudit_002 (Ext. 1 – Direct Linked Search)
Definition	This is a sub screen of the main UC_ServiceAudit_001 (Main Flow) showing more detailed information relating to selected Service audit trails.
Preconditions	User Personnel followed a Device link on another Self-Service Interface page which has directed them to the Service audit trails search page with an argument indicating that a search for a specific Device GUID should be carried out immediately
Inputs	Service audit trail (selected from output of UC_ServiceAudit_001)
Outputs	Service audit trail details for the Device: **Field Name** DCC Service User Organisation ID (SMKI Organisation ID) Device ID Sequence Number MPxN Service Request Received Date/Time Service Response Sent Date/Time Service Reference Simplified Transaction Status **Full Details:** Field Name Request ID Response ID DCC Service User Organisation ID (SMKI Organisation ID) Device ID CSP Region Mode of Operation Preceding Request ID (where applicable) MPxN Service Reference Service Reference Variant Command Variant Response Code Current Status Anomaly Detection Flag Status Change History

1.13.7 SM WAN Network Coverage

Interface transaction name	UC_CSPCoverage_001 (Main Flow)
Definition	Enables User Personnel to check SM WAN coverage data at a postcode level across GB in each of the three Regions to assist with rollout planning
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	One of the following: - full postcode - full postcode and property name/number - a postcode district (all but the last three characters of a full postcode)
Outputs	CSP (the CSP responsible for this location/area) Postcode Property name/number (where appropriate)

	Coverage availability (Yes or No) Anticipated coverage date (if coverage availability was No), or "No Coverage Intended" Likelihood of connectivity Communications Hub Variant to be used Auxiliary equipment required Additional information A button to initiate the download of a comma separated variable file using the above list of outputs.

Interface transaction name	UC_CSPCoverage_002 (Ext. 1 – Direct Linked Search)
Definition	Enables User Personnel to view details of WAN coverage where returned as a result of a search other than that defined in UC_CSPCoverage_001 (Main Flow).
Preconditions	User Personnel followed a Device link on another Self-Service Interface page which has directed them to the WAN Coverage search page with an argument indicating that a search for a specific postcode or premises should be carried out immediately
Inputs	None
Outputs	CSP (the CSP responsible for this location/area) Postcode Property name/number (where appropriate) Coverage availability (Yes or No) Anticipated coverage date (if coverage availability was No), or "No Coverage Intended" Likelihood of connectivity (Low/Medium/High) Communications Hub Variant to be used Auxiliary equipment required Additional information

1.13.8 Communications Hub Availability and Diagnostics

Interface transaction name	UC_HubStatus_001 (Main Flow)
Definition	Enables User Personnel to attempt to diagnose and resolve incidents using the DCC's remote diagnostic tools
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	The initial Communications Hub Availability and Diagnostics search form has full access to all User Roles The button "Communicate With Device" is only accessible to Users where their User Role allows, for a meter point served by the Communications Hub in question. In order to be able to carry out a full diagnostics request, the User must be responsible for a meter point served by the hub Common Access Control Conditions apply (see section 1.13.3)
Inputs	Communications Hub Function Device GUID
Outputs	Anonymised table of up to the last five Service Requests transacted through the hub, showing time and success status in relation to the Service Request being issued to the Device. A table showing data provided by the CSP responsible for this hub (data

	resident on the hub displays "Requires Device Communication"), and providing the following fields: Aerial Installed Aerial Type Birth Event Network Status Deactivation Date/Time (if network status is deactivated) SMWAN Connectivity Status HAN Status Last Connection Last Tamper Last Outage Last Restore

Interface transaction name	UC_HubStatus_002 (Ext. 1 – Direct Linked Search)
Definition	Enables User Personnel to view details of selected Communications Hub availability information where returned as a result of a search other than that defined in UC_HubStatus_001 (Main Flow).
Preconditions	User Personnel followed a Device link on another Self-Service Interface page which has directed them to the Communications Hub availability and diagnostics search page with an argument indicating that a search for a specific Communications Hub should be carried out immediately
Inputs	None (Device GUID selected on UC_HubStatus_001)
Outputs	Anonymised table of up to the last five service requests transacted through the hub, showing time and success status A table showing data provided by the CSP responsible for this hub (data resident on the hub displays "Requires Device Communication")

1.13.9 Forecasting and ordering of Communications Hubs and auxiliary equipment

Interface transaction name	UC_CSPOMS_001 (Main Flow)
Definition	Enables User Personnel to submit forecasts of future orders and actual orders for Communications Hubs and auxiliary equipment requirement to support the rollout of Smart Meters
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	Only Users with the role of Electricity Import Supplier or Gas Import Supplier have access
Inputs	Region selection (buttons)
Outputs	None (CSP web based OMS page opens in a new window)

1.13.10 Reporting

Interface transaction name	UC_Reports_001
Definition	Enables User Personnel to run a set of standard pre-defined and parameterised reports against DCC data, and download individual reports from a defined set of published reports provided by the DCC
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	Reports will only display data relating to the User Common Access Control Conditions apply (see section 1.13.3)
Inputs	Report-specific input parameters
Outputs	Report output data

1.13.11 Raise Service Management Incident

Interface transaction name	UC_RaiseSMI_001 (Main Flow)
Definition	Enables User Personnel to raise Service Management Incidents within the DCC Service Management Systems
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	User Personnel can only raise incidents associated with their User
Inputs	Incident category-specific parameters User Personnel contact details: - first name, last name, telephone number (mandatory fields) - email address (optional)
Outputs	Incident reference

Interface transaction name	UC_RaiseSMI_002 (Ext. 1 – Direct Linked Pre Selection)
Definition	This is a special case of UC_RaiseSMI_001 (Main Flow), where User Personnel navigated from another screen, and the category of the incident and some input fields are pre-populated
Preconditions	User Personnel followed a link on another page, indicating that they would like to raise an incident related to the content that they are viewing, including the Communications Hub status and Communications Hub Availability and Diagnostics page to raise an incident for that Communications Hub, or a knowledge article to provide feedback on that article.
Inputs	Incident category-specific parameters
Outputs	Incident reference

Interface transaction name	UC_RaiseSMI_003 (Ext. 2 – Premises Related Incident)
Definition	This is a special case of UC_RaiseSMI_001 (Main Flow), where User Personnel chose to raise a premises related incident, which has a more complex and specific workflow than other incident categories

Preconditions	User Personnel chose "Premises Related Incident" in the second step of UC-RaiseSMI_001
Access Control	User Personnel can only raise incidents associated with their User
Inputs	Device GUID or MPxN User SMKI organisation ID (where User represents more than one organisation) Incident-specific information (optional) Incident summary Your reference Incident notes (optional) User Personnel contact details: - first name, last name, telephone number (mandatory fields) - email address (optional)
Outputs	Incident reference

Interface transaction name	UC_RaiseSMI_004 (Ext. 3 – Direct Linked Pre Selection For Premises Related Incident)
Definition	This is a special case of UC_RaiseSMI_003, where User Personnel navigated from the Communications Hub availability and diagnostics screen, and the category of the incident and input/verification of the Communications Hub have been pre-verified and pre-populated
Preconditions	User Personnel followed a link from the Communications Hub Availability and Diagnostics page, indicating that they would like to raise a premises related incident against the Communications Hub that they are viewing.
Inputs	Incident-specific information (optional) Incident summary Business impact Incident notes (optional) User Personnel contact details: - first name, last name, telephone number (mandatory fields) - email address (optional)
Outputs	Incident reference

1.13.12 Update Service Management Incident

Interface transaction name	UC_UpdateSMI_001 (Main Flow)
Definition	Enables User Personnel to make updates to existing service management incidents within the DCC Service Management Systems
Preconditions	• Common Authentication Preconditions apply (see section 1.13.2). • User Personnel must be appropriately privileged to update the incident in question (as a result of the incident having been raised by User Personnel, or the User being an interested party in the incident). User Personnel would be an interested party to an incident if it is premises-related (i.e. raised against a Communications Hub) and the User Role allows, for a meter point served by the Communications Hub in question • User Personnel will have navigated from UC_ViewSMI_002
Access Control	To update an incident, User Personnel must have raised the incident Common Access Control Conditions apply (see section 1.13.3)

	User Personnel will only be able to provide updates on incidents raised by organisations with which they are associated
Inputs	Incident reference Type of update Update text
Outputs	Update confirmation

1.13.13 View Service Management Incident

Interface transaction name	UC_ViewSMI_001 (Main Flow)
Definition	Enables User Personnel to view details of previously raised Incidents within the DCC Service Management System
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	The incidents shown will be limited to those raised by the User, or where the User is an interested party in the incident Common Access Control Conditions apply (see section 1.13.3)
Inputs	Incident (selected from prepopulated list of incidents raised by their organisation or in which they are an interested party)
Outputs	None (UC_ViewSMI_002 presents incident details)

Interface transaction name	UC_ViewSMI_002 (Ext. 1 – View Specific Incident)
Definition	This is a sub screen of the main UC_ViewSMI_001 (Main Flow) showing more detailed information relating to selected service management incident information
Preconditions	User Personnel followed a link from another Interface Transaction indicating that they would like to see the details of a specific service management incident, and is appropriately privileged to view details of the incident (i.e. has been raised by User Personnel, or where the User is an interested party in the incident)
Access Control	The incidents shown will be limited to those raised by the User, or where the User is an interested party in the incident The Interface Transaction withholds from an interested party of the incident certain personal information about the raising individual, contact details and incident update description Common Access Control Conditions apply (see section 1.13.3)
Inputs	None (incident prepopulated from UC_ViewSMI_001)
Outputs	Summary text Incident notes Raising individual - first and last name (not visible to interested parties) Raising organisation (User) Device (where appropriate) Comms Hub model and version (where appropriate) MPxNs related to incident - comma-separated list CSP Diagnostic output (where appropriate) Postcode (where appropriate) Your reference Current status

	Target resolution date/time Requester contact details - first and last name, telephone number and email (not visible to interested parties) Additional contact details - first and last name, telephone number and email (not visible to interested parties) Incident priority

1.13.14 Knowledge Management

Interface transaction name	UC_KnowledgeManagement_001 (Main Flow)
Definition	Enables User Personnel to view relevant help and support information (provided by DCC and its Service providers), for early triage of User issues and queries, including access to the anonymous resolution details of service management problems and Incidents
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	Article selection
Outputs	Article details - Title - Creation Date/Time - Creator - Last Modifier - Tags - Article text - Attachments (optional)

1.13.15 Forward Schedule of Change

Interface transaction name	UC_Schedule_001 (Main Flow)
Definition	Enables User Personnel to view details of any planned maintenance scheduled within the DCC systems or relating to SM WANs, high risk or high impact changes, and release schedules relating to releases of Communications Hub firmware, parse & correlate software, SMKI software, SEC releases, DUIS releases, other major DCC releases, meter firmware events and change freezes
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	Meter firmware events will only be visible to Users associated with relevant Devices Common Access Control Conditions apply (see section 1.13.3)
Inputs	None
Outputs	Planned start date/time Planned end date/time Event type System component (or release/change type) Impact severity Geographic impact Notes Full details - button linking to UC_Schedule_003

Interface transaction name	UC_Schedule_002 (Ext. 1 – Calendar View)
Definition	Enables User Personnel to view details of planned events within the DCC systems or relating to SM WANs in a calendar format
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	Meter firmware events will only be visible to Users associated with relevant Devices.
Inputs	None
Outputs	Calendar day cells containing items representing event types relevant to that day

Interface transaction name	UC_Schedule_003 (Ext. 2 – View Specific Event)
Definition	Allows User Personnel, having chosen to view a specific event from UC_Schedule_001 or UC_Schedule_002, to view the full details held about the event in question
Preconditions	User Personnel followed a link from UC_Schedule_001 or UC_Schedule_002, choosing to view the full details held about a specific event
Access Control	Meter firmware events will only be visible to Users associated with relevant Devices Common Access Control Conditions apply (see section 1.13.3)
Inputs	Event (selected on UC_Schedule_001 or UC_Schedule_002)
Outputs	Event details: - event reference - planned start date/time - planned end date/time - event Notes For maintenance and change freeze events: - event type - System component or Region - impact severity - geographic impact For release, meter firmware and change events: - release/change type - manufacturer's reference - manufacturer's notes - Device type and model - firmware version

1.13.16 DCC Service Status

Interface transaction name	UC_ServiceDashboard_001 (Main Flow)
Definition	Enables User Personnel to view a one page dashboard of DCC component availability for the DCC Service
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	None
Outputs	List of system components comprising: - System component name - high level status of component - count of the number of underlying service alerts for the component Link to service alerts relating to Major Incidents

1.13.17 DCC Service Alerts

Interface transaction name	UC_ServiceAlerts_001
Definition	Enables User Personnel to view any service affecting news / alerts and other useful text (in terms of quality of service delivery and service management) to the User
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	None
Outputs	List of currently active Alerts: - Service Alert ID (link to UC_ServiceAlerts_002) - System component/s - listed in UC_Servicedashboard_001 - geographic impact - alert creation - expected resolution - alert closure - latest update

Interface transaction name	UC_ServiceAlerts_002 (Ext. 1 – View Specific Alert)
Definition	This Interface Transaction allows User Personnel, having chosen to view a specific DCC Service Alert from UC_ServiceAlerts_001, to view the full details held about the alert in question.
Preconditions	User Personnel followed a link from UC_ServiceAlerts_001, choosing to view the full details held about a specific alert.
Inputs	Alert ID (specified in UC_ServiceAlerts_001)
Outputs	List of currently active Alerts: - Service Alert ID (link to UC_ServiceAlerts_002) - System Component/s - listed in UC_Servicedashboard_001 - geographic impact - alert creation - expected resolution - alert closure - latest update Reverse chronological list of updates for the alert, each comprising: - date/time of update - person/entity providing update - update text

1.13.18 FAQs

Interface transaction name	UC_FAQ_001 (Main Flow)
Definition	Enables User Personnel to access helpful DCC Service Frequently Asked Questions
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	Text filter string (optional) Tag selection from list of all tags (optional)
Outputs	FAQ question and answer Attached documents (optional)

1.13.19 DCC User Manuals

Interface transaction name	UC_Manuals_001 (Main Flow)
Definition	Enables User Personnel to access a set of DCC user manuals which help Users understand how the DCC Service operates
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	Article reference Article usefulness rating selector
Outputs	Article page: - title of the article - creation date/time - creator - last modification - last modifier - tags - textual description of the user manual, other document, or content

1.13.20 Service Catalogue Publication/Call Off

Interface transaction name	UC_ServiceCatalogue_001 (Main Flow)
Definition	Enables User Personnel to raise Service Management Service Requests with the DCC and track and update the status of such Requests within the DCC Service Management Systems
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	User Personnel will only be able to see requests raised by the User with which they are associated
Inputs	By accessing this page User Personnel will see the information listed in outputs section. Raise new request option (button) – redirects User Personnel to UC_ServiceCatalogue_00
Outputs	The Self-Service Interface will display all open service catalogue requests raised by their organisation with the following fields: Service request ID (hyperlink to UC_ServiceCatalogue_002) - Work order reference Request type Raised date/time Current delivery status

Interface transaction name	UC_ServiceCatalogue_002 (Ext. 1 – View Specific Request)
Definition	This Interface Transaction allows User Personnel, having chosen to view a specific service catalogue request from UC_ServiceCatalogue_001, to view the full details held about the request in question.
Preconditions	• User Personnel followed a link from UC_ServiceCatalogue_001, choosing to view the full details held about a specific request.
Access Control	User Personnel will only be able to see requests raised by the User with which they are associated
Inputs	From selection in UC_Service_Catalogue_001
Outputs	Service Request ID (hyperlink to UC_ServiceCatalogue_002) - Work order reference Your reference Request type Raised date/time Current delivery status Raising user Raising Organisation - SMKI Organisation ID Requester contact details - first and last name, telephone number and email. Additional contact details - first and last name, telephone number and email

Interface transaction name	UC_ServiceCatalogue_003 (Ext. 2 – Browse Catalogue / Raise Request)
Definition	Allows User Personnel to browse the service catalogue and raise a new service catalogue request
Preconditions	User Personnel followed a link from UC_ServiceCatalogue_001, choosing to browse the service catalogue and/or raise a new service catalogue request.
Access Control	User Personnel will only be able to raise requests on behalf of the User with which they are associated
Inputs	Business service category (selection list) Business service category services (selection list) Service request types (selection list) Raise request button First name - mandatory string Last name - mandatory string Telephone number - mandatory string Email address - a valid email address “Update contact details” button
Outputs	Final confirmation screen, showing the categories, inputs and contact details that have been provided, with a “Raise Request” button

1.13.21 User Account Management

Interface transaction name	UC_OrgManager_001 (Main Flow)
Definition	Enable Users electing to use the DCC’s Identity Provider Service to manage their SSI accounts and associated settings (e.g. password resets) for all subsequently created User Personnel accounts created by an Administration User.
Preconditions	• Common Authentication Preconditions apply (see section 1.13.2) • User Personnel must be an Administration User for their organisation/s • The Administration User has pressed the “Manage My Users” button on their profile page (UC_Profile_001)
Access Control	User Personnel access is specific to the User
Inputs	User search page - This shows a sortable, pageable table of User Personnel accounts, with the following details in each row: - username (hyperlink to UC_OrgManager_002) - display name - Account Status (Active/Deleted/Locked) - last login date “Create New User” button - Pressing this button redirects the user to UC_OrgManager_003
Outputs	Displayed on SSI

Interface transaction name	UC_OrgManager_002 (Ext. 1 – Manage User)
Definition	Enable appropriately privileged User Personnel to unlock, delete or manage the details of another account created within their corporation.
Preconditions	• Common Authentication Preconditions apply (see section 1.13.2) • An Administration User has selected an individuals account to amend or reset in UC_OrgManager_001
Access Control	Only available to Administration Users of their organisation(s)
Inputs	Username - not editable Account status – not editable First name Last name Organisations - a list of checkboxes representing the SMKI Organisations that may be assigned to the person. May be checked to create organisation membership Roles - a list of checkboxes relating to roles existing within the Identity Management System and assignable to this person (as defined in section 1.12.2). May be checked to create role membership Update User button - allows changes made to these fields to be saved. If any fields are found to be invalid, the form is re-displayed with validation errors messages and suggestions for resolution provided. Delete User button - allows the account to be deleted. A confirmation dialog is displayed, which must be accepted before deleting the account. Reset – a checkbox allowing the account to be unlocked, in which case a new single use password is generated for the account being amended
Outputs	User Personnel account changes assigned, stored or deleted.

Interface transaction name	UC_OrgManager_003 (Ext. 1 – Create User)
Definition	Enable appropriately privileged User Personnel to create a new person's account within their corporation.
Preconditions	• Common Authentication Preconditions apply (see section 1.13.2) • The Administration User has pressed the “Create New User” button in UC_OrgManager_001
Access Control	Only available to Administration Users of their organisation(s)
Inputs	Username - Desired username (globally unique within the DCC Identity Provider Service) First name Last name Organisations - A list of checkboxes representing the organisations that may be assigned to the person. May be checked to create organisation membership Roles - A list of checkboxes relating to roles existing within the Identity Management System and assignable to this person. May be checked to create role membership
Outputs	New User Personnel account created (within their corporation).

1.13.22 User Profile Information

Interface transaction name	UC_Profile_001
Definition	Enables User Personnel to view information about the account details with which they are accessing the Self-Service Interface, and details of their current permissions to Interface Transactions
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	By accessing this page User Personnel are shown the items listed in the outputs section.
Outputs	Unique user identification - changes depending on the nature and type of the Identity Provider Service Organisations - A list of SMKI Organisation IDs that the User is associated with Roles - A list of roles (as defined in section 1.12.2) assigned to the person Use cases - A list of SSI Interface Transactions, with a "Yes" or "No" indication of whether the person has access as a result of their role(s) (see section 1.12.2) Bookmarks - A list of links to content that the person has bookmarked.

1.13.23 Search

Interface transaction name	UC_Search_001
Definition	Enables User Personnel to search for content provided by the Self-Service Interface by use of tagged keywords, or textual content of page titles and descriptions
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Inputs	A text box for entering search terms, a control allowing the User Personnel to select whether to match the terms using OR logic (any search term) or AND logic (all search terms), and a search button
Outputs	Search results. Each search result consists of: The title of the located item of content (which is also a link to that piece of content). A short summary description of the content. Reasons that the content was found (i.e. matches found in title, description, tags or attached filenames). If no results are found matching the search criteria, a message is displayed to this effect.

1.13.24 Problem Management

Interface transaction name	UC_ProblemManagement_001 (Main Flow)
Definition	Enables User Personnel to view details of open problems related to incidents raised by their organisation, or in which their organisation/s has an interest
Preconditions	Common Authentication Preconditions apply (see section 1.13.2)
Access Control	The problems shown will be limited to those linked to an incident raised by the User, or where the DCC have explicitly defined that the problem should

	be visible to the User due to that User having an interest in the problem. Common Access Control Conditions apply (see section 1.13.3)
Inputs	User Personnel are presented with a page which shows a list of the service management problems visible to them as a result of them having been the raising organisation or an interested party in an incident attached to a problem
Outputs	For each problem the following items are displayed Problem Reference Current Problem Status Problem Summary

Interface transaction name	UC_ProblemManagement_002 (Ext. 1 – View Specific Problem)
Definition	This is a sub screen of the main UC_ProblemManagement_001 (Main Flow) Interface Transaction showing more detailed information relating to a selected service management problem.
Preconditions	User Personnel followed a link indicating that they would like to see the details of a specific service management problem, and is appropriately privileged to view details of the problem.
Access Control	The problems shown will be limited to those linked to an incident raised by the User, or where the DCC have explicitly defined that the problem should be visible to the User due to that User having an interest in it. Common Access Control Conditions apply (see section 1.13.3)
Inputs	User Personnel follows link from UC_ProblemManagement_001
Outputs	User Personnel shown a page listing the details of the problem Field Name Problem Reference Current Problem Status Problem Summary Problem Notes Problem priority Date Raised